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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/655,304

09/05/2003

Hironori Okado

116711

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25944

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10/31/2005

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EXAMINER

VY, HUNG T

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/655,304

Applicant(s)

OKADO, HIRONORI

Examiner

Hung T. Vy

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on the RCE filed 10/03/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/3/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

**Claim Rejections - 35 USC § 102**

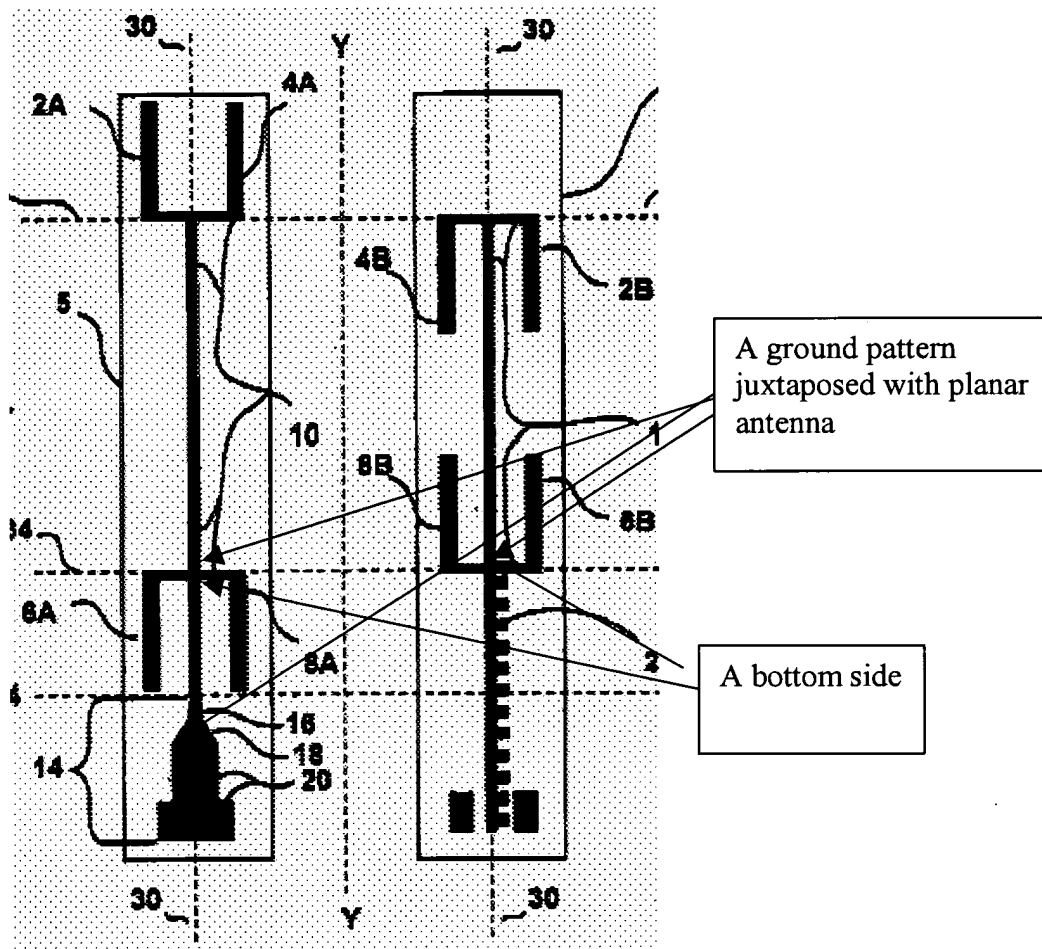
1. The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102 in view of the AIPA and H.R. 2215 that forms the basis for the rejections under this section made in the attached Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, and 10 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Lebaric et al., U.S. patent No. 6,747,605.

Claim 1, Lebaric et al. disclose an antenna, comprising: a planar antenna element (2,4,6..) having a feed point (24); and a ground pattern (14) (See column 4, line 50-55) juxtaposed with said planar antenna element (2,4,6,..) and wherein said ground pattern has a trimmed portion (16,18) causing to continuously change a distance between said planar antenna element said ground pattern (See column 4, line 43-50 and fig.1), said planar antenna element has a shape in which a bottom side thereof has a straight portion or a substantially straight portion adjacent to said ground pattern (See fig. below).



Claims 2, Lebaris et al. disclose the antenna, wherein said trimmed portion (16,18) is formed from a point (10,12) near said feed point toward a side being opposite to said planar antenna element (2,4,6...)(see fig. 1).

Claim 3, Lebaris et al. disclose the antenna, wherein said planar antenna element (2,4,6,...) and said ground pattern (16,18) are formed extending along counter directions respectively (See fig. 1).

Claim 4, Lebaris et al. disclose the antenna, wherein said ground element (16,18) is disposed without fully surrounding said planar antenna element (2,4,6...)(See fig. 1).

Claims 5-8, Lebaris et al. disclose the antenna, wherein said trimmed portion (16,18) is formed in a tapered shaped with respect to said feed point of said planar antenna element (see column 4, line 44), curved line being convex upwardly, and curved lines being convex downwardly (see fig. 1), tapered shaped (16,18) is symmetric with respect to a straight line (30) passing through said feed point of said planar antenna element (2,4,6,..) (See fig. 1).

Claim 10, Lebaris et al. disclose the antenna, lateral sides thereof are provided vertically or substantially vertically to said bottom side, and a cut-out portion is provided in a top side thereof (See fig. above).

### **Claim Rejections - 35 U.S.C. § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9, 11-12 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Lebaric et al., U.S. patent No. 6,747,605 in view of Abiko et al., U.S. Patent No. 4,816,835.

Claims 9, and 11-12 Lebaris et al. disclose the antenna, wherein said planar antenna element (2,4,6..) is formed on a dielectric substrate (5), (See fig. 1) but Lebaris et al. do not disclose said ground pattern is formed in or on a resin board, and said dielectric substrate is mounted on said resin board. However, Abiko et al. disclose the ground pattern in or on a resin board (See column 1, line 60-69 and column 2, line 1-8).

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Lebaric et al. to arrange the ground pattern in or on resin board so that the antenna minimizes the insertion loss, whereby the assembling ability can be improved thus the high gain can be attained for the stated purpose has been well known in the art as evidenced by the teaching of Abiko et al. (See column 2, line 5-8).

4. Claims 13-15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Lebaric et al., U.S. patent No. 6,747,605 in view of Knoishi et al., U.S. Patent No. 6,707,427.

Claim 13, Lebaris et al. disclose an antenna, comprising: a dielectric substrate (5) on which an antenna element is formed (2,4,6,...); and wherein said ground pattern (16-18) has a tapered shape with respect to a feed point of said antenna element (2,4,6,...), and said antenna element an edge portion being opposite to the ground pattern side of said antenna element (see fig. 1), but Lebaris et al. do not disclose a board on which said dielectric substrate is mounted and in or on which ground pattern is formed to be juxtaposed with said dielectric substrate. However, Konishi et al. disclose a board (26) on which said dielectric substrate (21) is mounted, and in or on which a ground pattern (28) is formed to be juxtaposed with said dielectric substrate (21)(See fig. 9 and 15). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Lebaric et al. to have board as taught by Konishi et al. The motivation for doing so would have been to provide the aboard in

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order to minimize the insertion loss, whereby the assembling ability can be improved thus the high gain can be attained and easy to obtain.

Claims 14, Konishi et al disclose ground pattern has a region to separate said dielectric substrate (See fig. 6a).

Claim 15, adds into claim 13 "a RF circuitry mounted on said ground pattern" which Kosishi et al. teach on Fig. 6B and 6C.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private Pair or Public Pair. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung T. Vy  
Art Unit 2821  
October 26, 2005.

Primary Examiner  
